internetvista Web Scenario Documentation

Introduction to Web Scenario

This documentation describes the **internetvista Web Scenario Definition Language**, which is used to define XML-based scenarios for transactional monitoring of websites.

A **web scenario** is an XML sequence of steps that simulates a multi-page process on a website. This type of monitoring (also called *transactional monitoring*) is useful for validating workflows such as search operations, product purchases, or user registrations on e-commerce or application sites.

Each scenario consists of several ordered **steps**, where each step depends on the successful execution of the previous one.

A scenario can include:

- Session & cookie management
- Form data submission simulation
- Hyperlink navigation
- JavaScript/Ajax interaction

Error Handling

- Identifies the failing step
- Provides detailed error info

Performance Monitoring

- Measures response times per step
- Data accessible via the management console

Success Criteria

All steps are completed successfully without any errors or issues, ensuring the process runs smoothly and meets the expected outcomes.

XML Scenario Structure

General Format

```
<?xml version="1.0" encoding="UTF-8"?>
<scenario version="2.0">
  <step>
  <!-- step description →
</step>
<step>
<!-- step description →
</step>
<!-- Additional steps →
</scenario>
```

Types of Steps

- **URL step** – Direct URL access (typically first step)
- **Click step** – Clicking elements (button, link, image)

Step Details

Step Tag

<step>...</step>

Optional attributes:

- **name** → identifies the step in interface/alerts

- **baseStepIndex** → base on a previous step by index

- **baseStepName** → base on a previous step by name

- **sleepBefore** → pause before execution (ms)

- **retry** → retry count on failure

- **sleepBeforeRetry** → pause before retry (ms)

Example:

<step name="home" sleepBefore="5000" retry="1" sleepBeforeRetry="3000">

URL Step

```
<step>
  <url>https://example.com</url>
</step>
```

- Always **HTTP** or **HTTPS**

- Can appear at any point in scenario

Click Step

```
<step>
  <click xPathExpression="//input[@id='submit']" />
</step>
```

- Uses **XPath** to locate elements

- JavaScript/Ajax executed if enabled (default: true)

- Can include **pre-click user actions**:

```
<step name="submit form">
  <click xPathExpression="//*[@id='submit_btn']">
    <userActions>
      <fillField xPathExpression="//*[@id='name']" value="John" />
      <fillField xPathExpression="//*[@id='age']" value="50" />
      <selectDropdown xPathExpression="//*[@id='city']" value="Paris" />
      <selectRadioButton xPathExpression="//*[@id='radio1']" />
    </userActions>
  </click>
</step>
```

User Actions

- **fillField** → enter text in field

- **selectDropdown** → select list element

- **selectRadioButton** → select radio button

- **checkCheckBox** → check a box

- **uncheckCheckBox** → uncheck a box

- **uploadFile** → upload file

Step Parameters

<connectionTimeout>60000</connectionTimeout>

<responseTimeout>60000</responseTimeout>

<matchingSentence>hello world</matchingSentence>

<matchingSentenceOperator>contains</matchingSentenceOperator>

<username>monitoringUser</username>

<password>monitoringPassword</password>

<userAgent>my user-agent</userAgent>

<enableJavascript>true</enableJavascript>

<clearCache>true</clearCache>

<request-headers>

 <request-header name="Accept-Language" value="en-us,en,fr" />

```
</request-headers>
```

```
<clientCertificateFileName>someCertificate.p12</clientCertificateFileName>
```

```
<clientCertificatePassword>some password</clientCertificatePassword>
```

```
<excludeResources>

  <resource url="www.google-analytics.com" match="contains" />

</excludeResources>
```

Common Parameters

Define global step parameters to avoid repetition

```
<parameters>

  <matchingSentenceOperator>contains</matchingSentenceOperator>

  <excludeResources>

    <resource url="www.google-analytics.com" match="contains" />

    <resource url="www.googleadservices.com" match="contains" />

  </excludeResources>

</parameters>
```

Variables and Functions

Variables

```
<variables>
  <variable name="variable_name" type="string" value="xxx" />
</variables>
```

```
<parameter name="someParam" value="VARIABLE::variable_name::" />
```

Functions

`<parameter name="DEPART_DD" value="FUNCTION::FORMAT_DATE(TODAY(),'dd/MM/yyyy')::"`

Common Functions:

- TODAY(), GET_TIMESTAMP(), GET_DATE(), FORMAT_DATE()

- ADD_DAYS(), REMOVE_MONTHS(), CHANGE_TIMEZONE()

- DECRYPT()

- ADD(), CONTAINS()

- GET_CONTENT(), IF()

- URL_ENCODE(), GET_RANDOM_ALPHABETIC(), etc.

Sample Scenarios

Login Scenario

```
<scenario version="2.0">
  <parameters>
    <matchingSentenceOperator>contains</matchingSentenceOperator>
    <excludeResources>
      <resource url="www.google-analytics.com" match="contains" />
    </excludeResources>
  </parameters>
  <step name="home">
    <url>https://extranet.mywebsite-sample-url.com</url>
    <matchingSentence>Home</matchingSentence>
```

```xml
    </step>
    <step name="login">
      <click xPathExpression="//input[@type='submit']">
        <userActions>
          <fillField xPathExpression="//*[@name='user']" value="test" />
          <fillField xPathExpression="//*[@name='pwd']" value="FUNCTION::DECRYPT('XXX')::" />
        </userActions>
      </click>
      <matchingSentence>Welcome on the extranet</matchingSentence>
    </step>
</scenario>
```

Checkout Process Scenario

```xml
<scenario version="2.0">
  <parameters>
    <matchingSentenceOperator>contains</matchingSentenceOperator>
    <excludeResources>
      <resource url="www.google-analytics.com" match="contains" />
    </excludeResources>
  </parameters>
  <step name="home page">
    <url>http://www.my-ecommerce-sample-url.com</url>
    <matchingSentence>My big deal product</matchingSentence>
  </step>
  <step name="select product">
    <click xPathExpression="//*[@id='product1']" />
    <matchingSentence>Description of my product 1</matchingSentence>
  </step>
  <step name="add to shopping cart">
    <click xPathExpression="//input[@type='submit']">
      <userActions>
```

```xml
        <fillField xPathExpression="//*[@name='qty']" value="5" />
      </userActions>
    </click>
    <matchingSentence>Total price</matchingSentence>
  </step>
  <step name="login">
    <click xPathExpression="//input[@type='submit']">
      <userActions>
        <fillField xPathExpression="//*[@name='user']" value="test" />
        <fillField xPathExpression="//*[@name='pwd']" value="FUNCTION::DECRYPT(XXX)::" />
      </userActions>
    </click>
    <matchingSentence>Choose the delivery method</matchingSentence>
  </step>
  <step name="checkout process">
    <click xPathExpression="//*[@id='checkout_btn']">
      <userActions>
        <fillField xPathExpression="//*[@name='deliveryMethod']" value="UPS" />
        <fillField xPathExpression="//*[@name='tracking']" value="true" />
      </userActions>
    </click>
    <matchingSentence>Your order is processed</matchingSentence>
  </step>
</scenario>
```